

# BIP Dashboard Indicator Summary for Madagascar

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Bioclimatic Ecosystem Resilience Index

Biodiversity Engagement

Biodiversity Habitat Index

Biodiversity Intactness Index in tropical and subtropical forest biomes

Cumulative Human Impacts on Marine Ecosystems

Ecological Footprint of Consumption

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Growth in Species Occurrence Records Accessible Through GBIF

Local Breeds at Risk of Extinction

Ocean Health Index

Protected Area Connectedness Index

Protected Area Coverage of Key Biodiversity Areas

Protected Area Representativeness Index

Red List Index

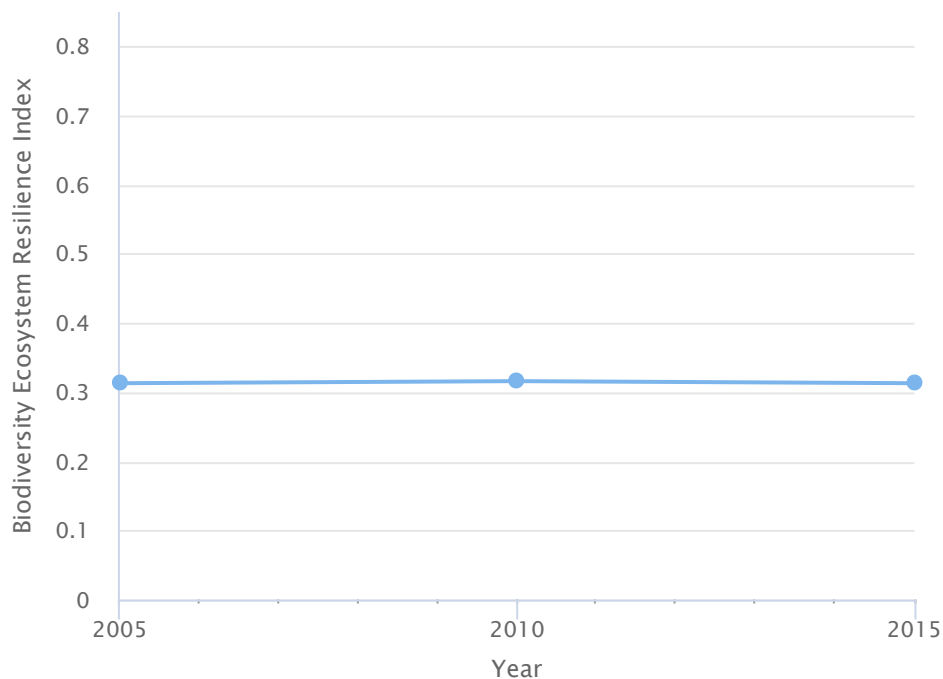
### Recommended Citation:

Biodiversity Indicators Partnership. 2020. Indicator summary for Madagascar. Internet resource available at: <https://bipdashboard.natureserve.org/>



## Indicator Results for Madagascar:

The Bioclimatic Ecosystem Resilience Index for Madagascar was 0.313 in 2015. During 2005-2015, the index changed at an annual rate of 0.009%.



Data sources: [Commonwealth Scientific and Industrial Research Organization \(CSIRO\)](#)

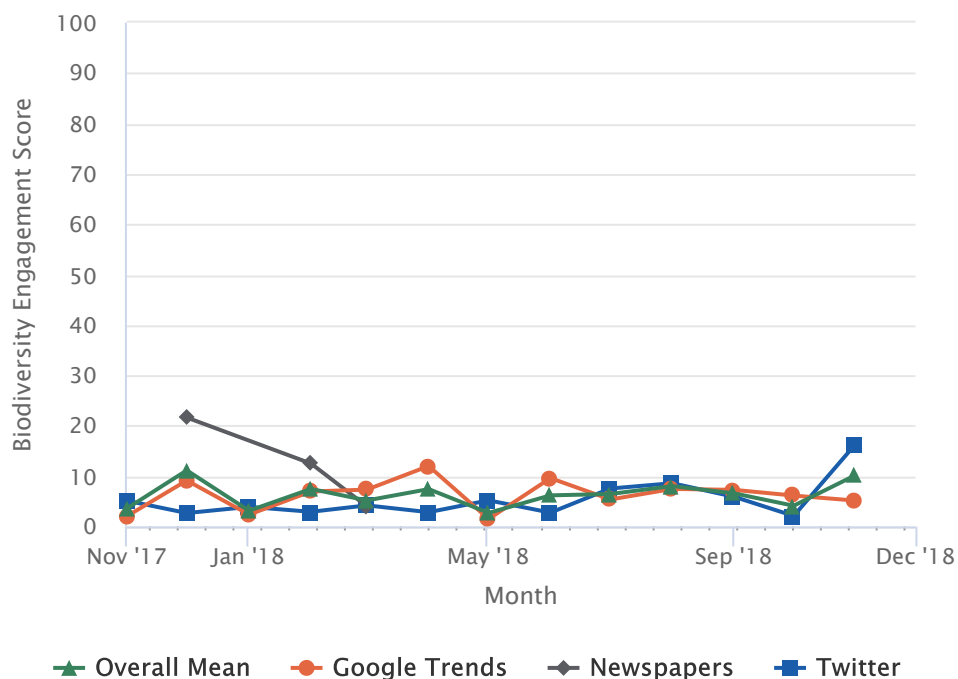
## How to Interpret the Indicator:

The Bioclimatic Ecosystem Resilience Index (BERI) addresses just one of many possible dimensions of ecosystem resilience, by assessing the capacity of ecosystems to retain biological diversity in the face of ongoing, and uncertain, climate change.

Click [here](#) for more information about this indicator.



**Indicator Results for Madagascar:**  
The average overall Global Biodiversity Engagement Indicator score for Madagascar was 6.32 in 2018.



Data sources: [Conservation International](#)

## How to Interpret the Indicator:

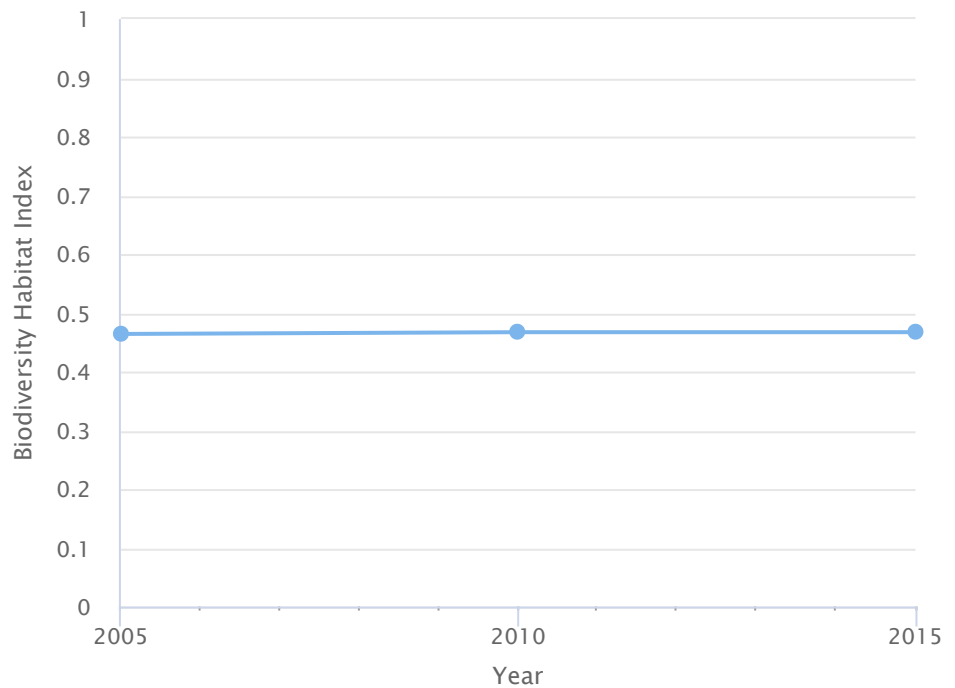
The Global Biodiversity Engagement Indicator integrates data from Twitter, online newspapers, and Google Trends to gauge public awareness and appreciation of biodiversity.

Click [here](#) for more information about this indicator.



## Indicator Results for Madagascar:

The Biodiversity Habitat Index for Madagascar was 0.467 in 2015. During 2005-2015, the index changed at an annual rate of 0.064%.



Data sources: [Commonwealth Scientific and Industrial Research Organization \(CSIRO\)](#)

## How to Interpret the Indicator:

The Biodiversity Habitat Index (BHI) estimates the impacts of habitat loss and degradation on the retention of terrestrial biodiversity. It integrates information from remotely sensed land-cover and land-use change datasets with modeled fine-scaled spatial variation in biodiversity composition.

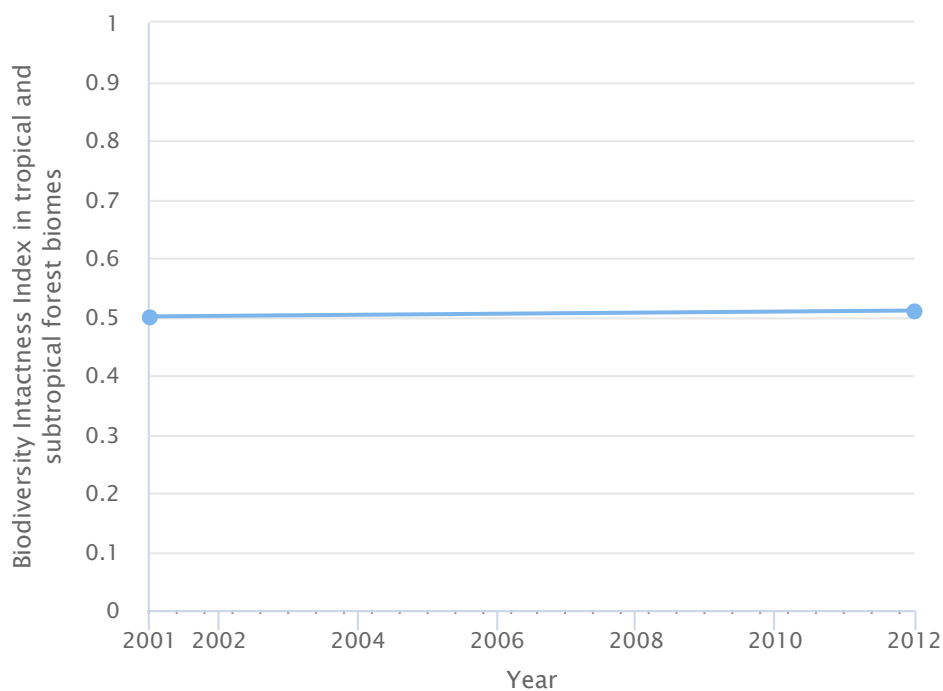
Click [here](#) for more information about this indicator.

# Biodiversity Intactness Index in tropical and subtropical forest biomes



## Indicator Results for Madagascar:

The Biodiversity Intactness Index in tropical and subtropical forest biomes for Madagascar was 0.51 in 2012. During 2001-2012 the index changed at an annual rate of 0.18%.



Data sources: [De Palma et al. 2018](#)

## How to Interpret the Indicator:

The Biodiversity Intactness Index (BII) estimates how the average abundance of native terrestrial species in a region compares with their abundances before pronounced human impacts. This layer represents the average country-level change in BII between 2001 and 2012 within tropical and subtropical forest biomes.

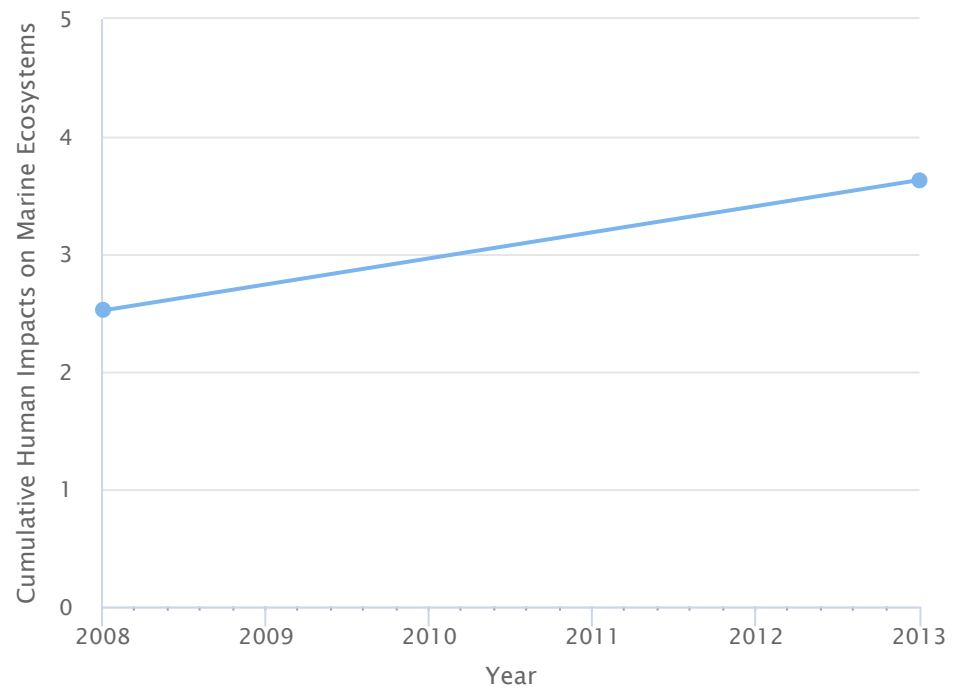
This indicator is available at the country scale.

Click [here](#) for more information about this indicator.



## Indicator Results for Madagascar:

The Cumulative Human Impacts on Marine Ecosystems (using a full set of 19 input datasets) for Madagascar was 3.89 in 2013. During 2008-2013 (using the 12 datasets that allow for interannual comparisons), the score changed at a mean annual rate of 7.59%.



Data sources: [National Center for Ecological Analysis and Synthesis \(NCEAS\)](#)

## How to Interpret the Indicator:

### Cumulative Human Impacts on Marine Ecosystems

This indicator predicts how anthropogenic stressors such as pollution, climate change, shipping and fishing will impact marine biodiversity and ecosystems. It is a synthesis of multiple global anthropogenic drivers of change for 20 marine ecosystems.

This indicator is available on the Dashboard for exclusive economic zones at the country scale.

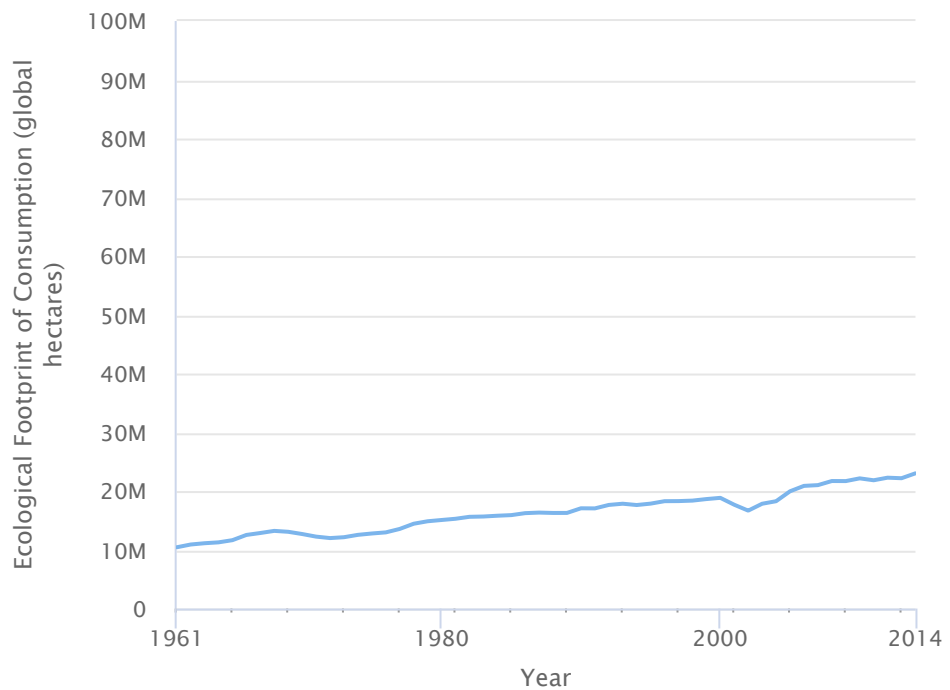
The original dataset is available at a 1km<sup>2</sup> resolution on the [National Center for Ecological Analysis and Synthesis](#) website

Click [here](#) for more information about this indicator.



## Indicator Results for Madagascar:

The Ecological Footprint for Madagascar was 23,019,830.2 global hectares in 2014. For the time series of available data through 2014, the Ecological Footprint changed at an annual rate of 1.5%.



Data sources: [Global Footprint Network](#)

## How to Interpret the Indicator:

### Ecological Footprint

The Ecological Footprint measures the amount of human demand exerted on ecosystem services compared to nature's supply of ecological assets.

This indicator is available at the country scale.

The original dataset is available at 1km resolution on the Global Footprint Network website.

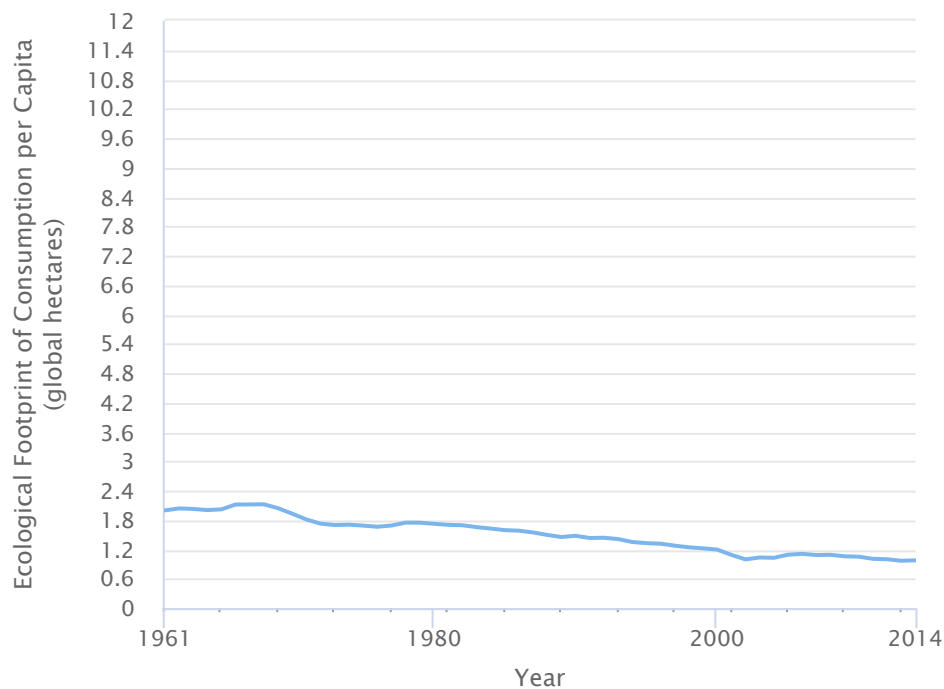
Click [here](#) for more information about this indicator.

# Ecological Footprint of Consumption per Capita



## Indicator Results for Madagascar:

The Ecological Footprint of Consumption per Capita for Madagascar was 0.9766 global hectares in 2014. For the time series of available data through 2014, the Ecological Footprint of Consumption per Capita changed at an annual rate of -0.013%.



Data sources: [Global Footprint Network](#)

## How to Interpret the Indicator:

Ecological Footprint of Consumption per Capita is the ecological footprint of a region divided by the population of the region. If a country's Ecological Footprint per capita is higher than biocapacity per capita, its inhabitants are demanding more resources and producing more waste than their country can regenerate and absorb, respectively.

Click [here](#) for more information about this indicator.

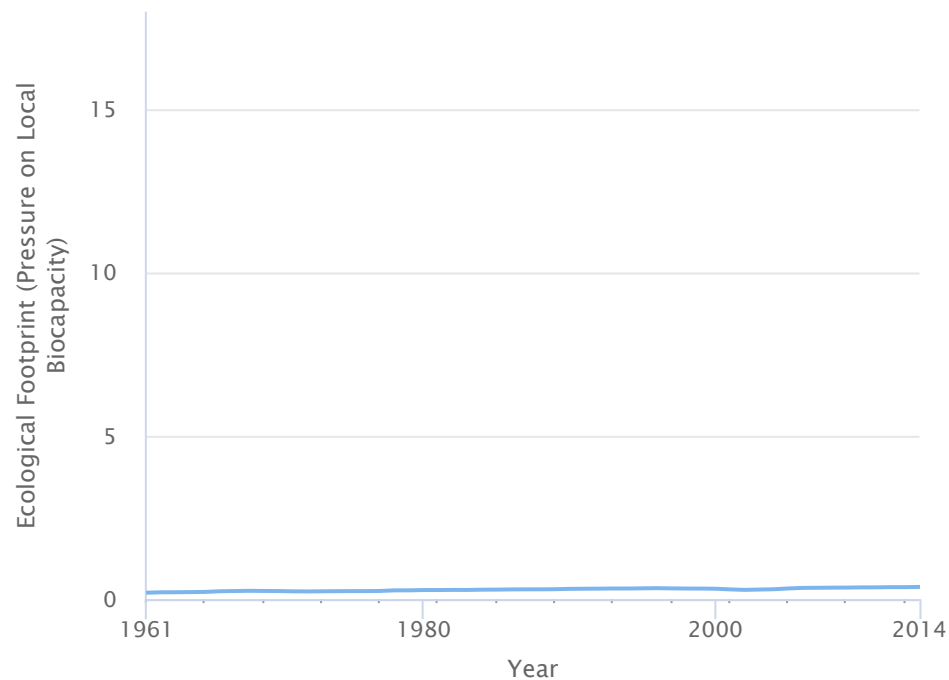


# Ecological Footprint (Pressure on Local Biocapacity)



## Indicator Results for Madagascar:

The Pressure on Local Biocapacity for Madagascar was 0.375 in 2014. For the time series of available data through 2014, the Pressure on Local Biocapacity changed at an annual rate of 1.214%.



Data sources: [Global Footprint Network](#)

## How to Interpret the Indicator:

Ecological Footprint (pressure on local biocapacity) represents the fraction of local regeneration (biocapacity) that is demanded through local harvest (and waste production). It is calculated as the Ecological Footprint of production (EFp) divided by biocapacity. Values less than 1 indicate that harvest and waste production are less than local regeneration/assimilation. Values greater than 1 indicate that harvest and waste production exceed local regeneration/assimilation.

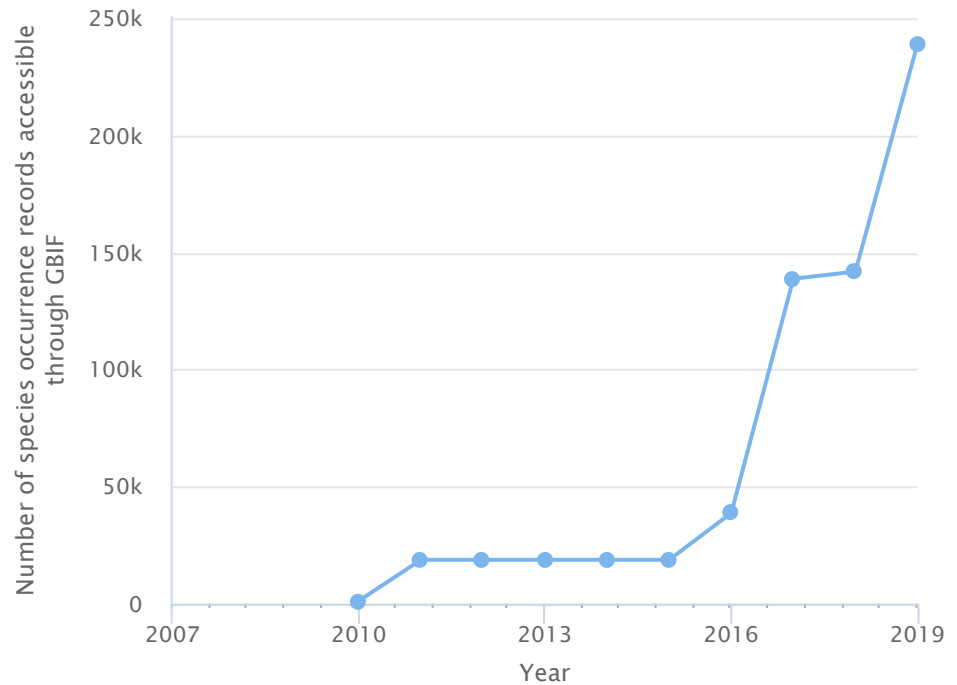
Click [here](#) for more information about this indicator.

# Growth in Species Occurrence Records Accessible Through GBIF



## Indicator Results for Madagascar:

There were 238,906 species occurrence records accessible through GBIF for Madagascar in 2019. For the period for which data are available, the number of species occurrence records accessible through GBIF changed at an annual rate of 78.97%



Data sources: [Global Biodiversity Information Facility](#)

## How to Interpret the Indicator:

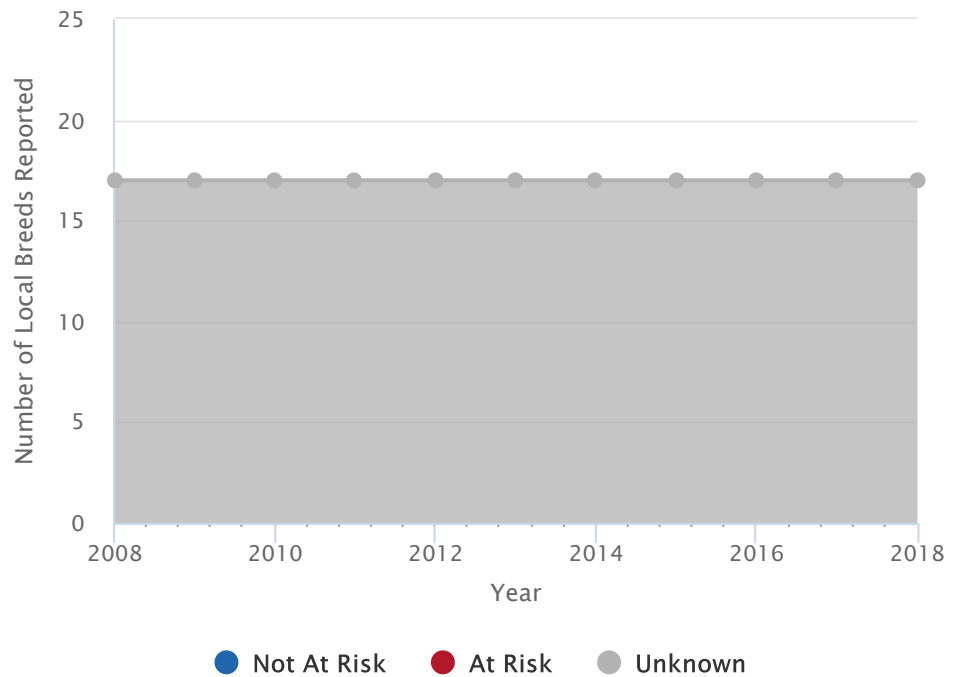
This indicator reflects the status and trends of shared biodiversity knowledge as measured through the number of species occurrence records accessible through the Global Biodiversity Information Facility (GBIF). The values represent the number of records (i.e., unique instances of a species being recorded in space and time) published by institutions in each country.

Click [here](#) for more information about this indicator.



## Indicator Results for Madagascar:

As of March 2018, the Proportion of Local Breeds with Risk Status Known for Madagascar was 0.



Data sources: [Domestic Animal Diversity Information System \(DAD-IS\)](#) (2018)

## How to Interpret the Indicator:

### Local Breeds at Risk of Extinction

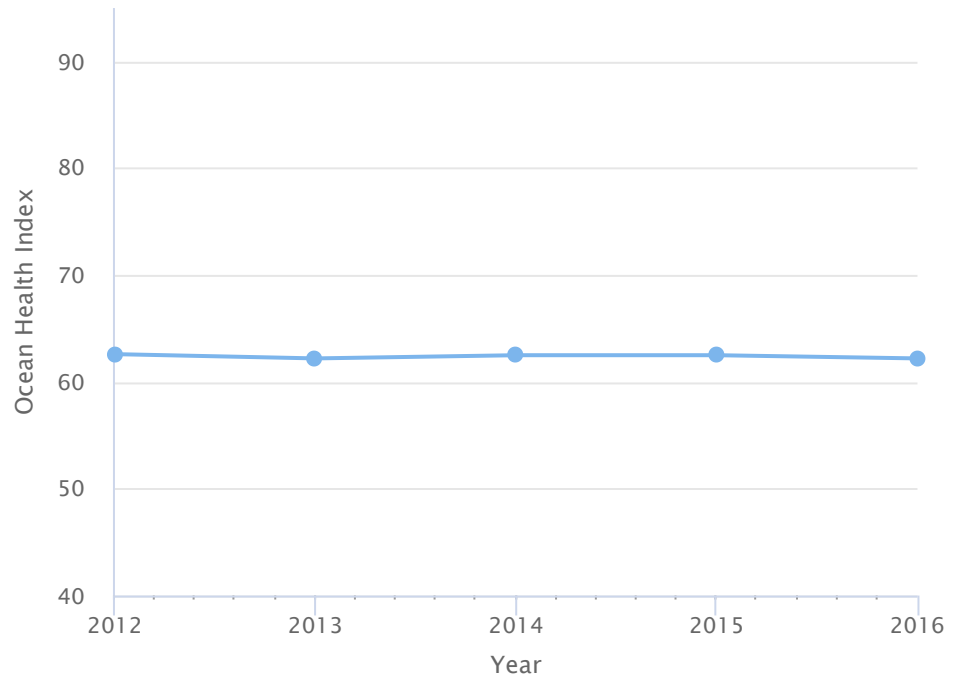
This indicator shows the extent to which the diversity of farmed and domesticated bird and mammal breeds is at risk of extinction.

This indicator is available on the Dashboard at the country scale.

Click [here](#) for more information about this indicator.



**Indicator Results for Madagascar:**  
 The Ocean Health Index for Madagascar was 62.2 in 2016. During 2012-2016, the index changed at an annual rate of -0.12%.



Data sources: [Ocean Health Index Science](#), [Ocean Health Index](#)

## How to Interpret the Indicator: Ocean Health Index

This indicator measures the state of the world's oceans based on how well they are able to sustainably provide the benefits and services that people need and desire. Scores range from 0-100, with 100 representing the best possible score.

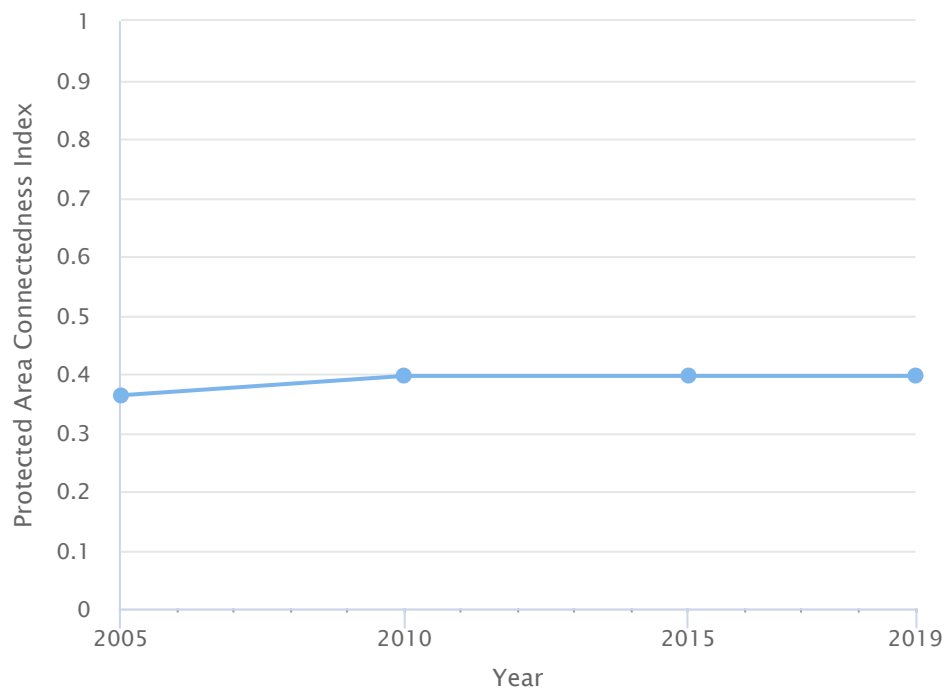
This indicator is available for exclusive economic zones at the country scale.

Click [here](#) for more information about this indicator.



#### Indicator Results for Madagascar:

The Protected Area Connectedness Index for Madagascar was 0.396 in 2019. During 2005-2019, the index changed at an annual rate of 0.6295%.



Data sources: [Commonwealth Scientific and Industrial Research Organization \(CSIRO\)](#)

#### How to Interpret the Indicator:

##### Protected Area Connectedness Index

The Protected Area Connectedness Index shows changes in connectivity among terrestrial protected areas and areas containing primary vegetation (habitat) in the surrounding non-protected landscape. It integrates information from remotely-sensed forest change and land cover change datasets with a global protected area database.

This indicator is available at basin and country scales.

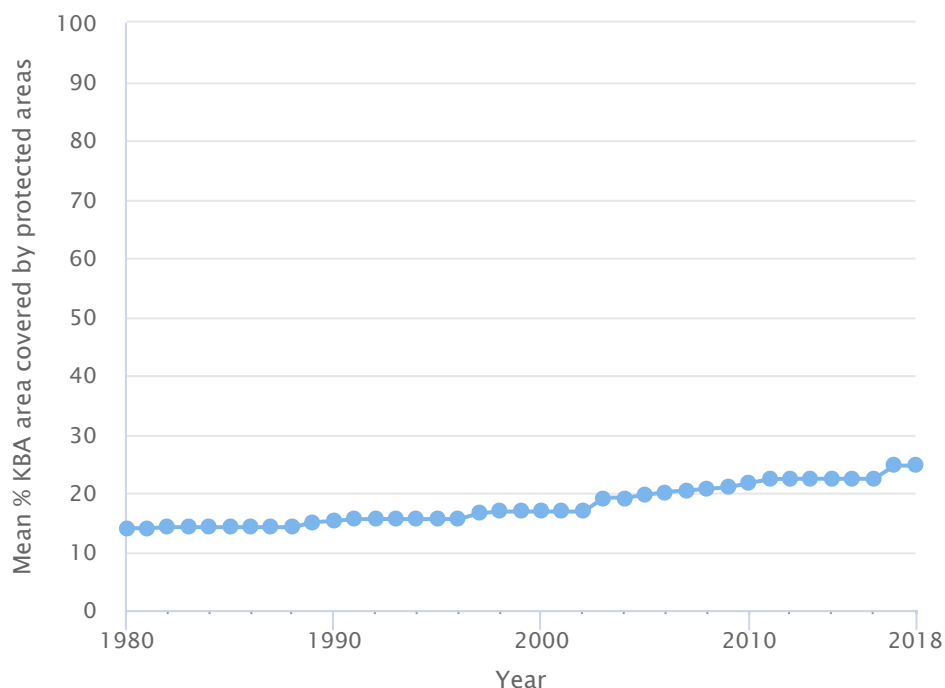
Click [here](#) for more information about this indicator.

# Protected Area Coverage of Key Biodiversity Areas



## Indicator Results for Madagascar:

The graph shows trends in the mean percentage of each Key Biodiversity Area (KBA) that is covered by Protected Areas, based on data on the date of establishment of Protected Areas in the *World Database on Protected Areas*, and spatial overlaps between digital polygons for Protected Areas and those for KBAs from the *World Database of Key Biodiversity Areas*. During 1980-2018, the mean percentage of each KBA covered by Protected Areas changed at an annual rate equivalent to 1.5%.



Data sources: [BirdLife International](#), [International Union for Conservation of Nature \(IUCN\)](#), and [UN Environment World Conservation Monitoring Centre \(UNEP-WCMC\) \(2018\)](#)

## How to Interpret the Indicator:

### Protected Area Coverage of Key Biodiversity Areas

This indicator Protected Area Coverage of Key Biodiversity Areas shows temporal trends in the mean percentage of each important site for terrestrial and freshwater biodiversity (i.e., those that contribute significantly to the global persistence of biodiversity) that is covered by designated protected areas.

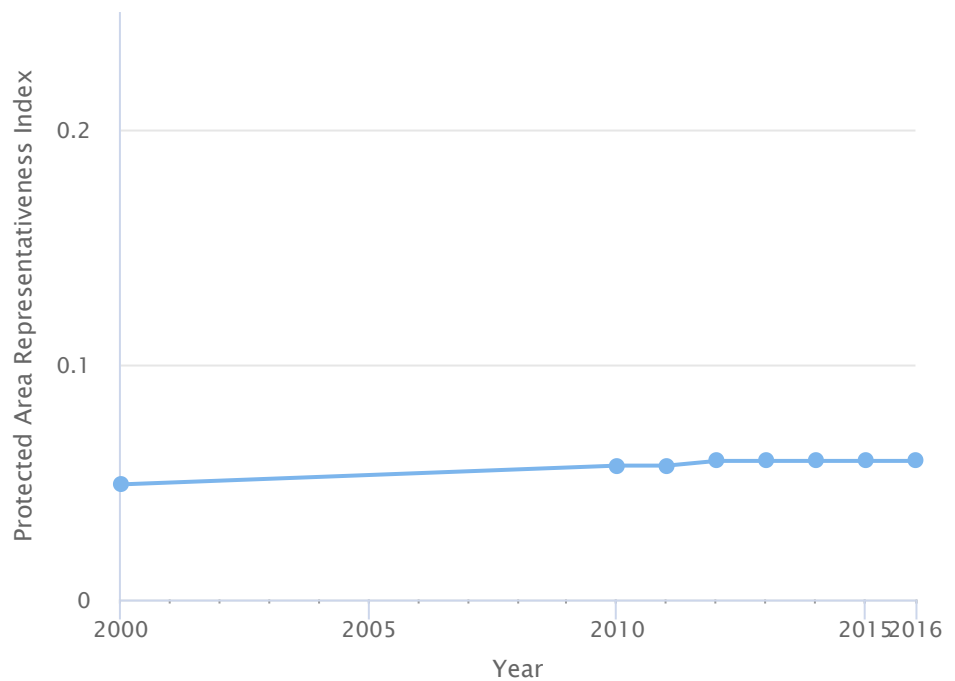
This indicator is available at country scale.

Click [here](#) for more information about this indicator.



## Indicator Results for Madagascar:

The Protected Area Representativeness Index for Madagascar was 0.059 in 2016. During 2000-2016, the index changed at an annual rate of 1.13%.



Data sources: [Commonwealth Scientific and Industrial Research Organization \(CSIRO\)](#)

## How to Interpret the Indicator:

### Protected Area Representativeness Index

The Protected Area Representativeness Index shows trends in the protection of terrestrial biodiversity. It integrates information from a global protected areas database with modeled fine-scaled spatial variation in biodiversity composition.

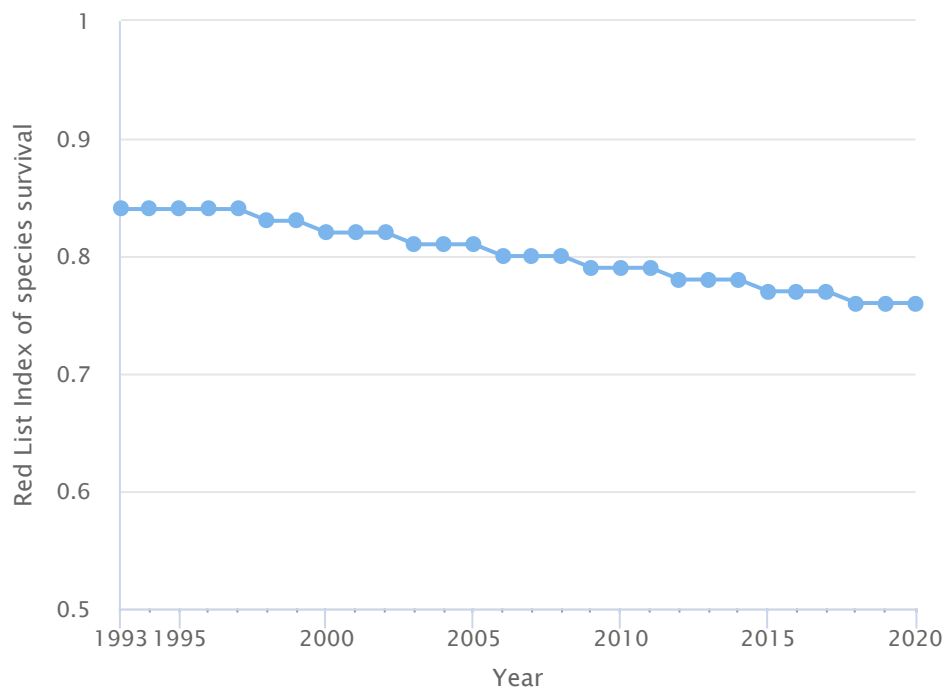
This indicator is available at the basin and country scales.

Click [here](#) for more information about this indicator.



### Indicator Results for Madagascar:

Red List Index of species survival for Madagascar, weighted by the fraction of each species' distribution occurring within the country. The index varies from 1 if the country has contributed the minimum it can to the global Red List Index (i.e. if all species in the country are classified as Least Concern) to 0 if the country has contributed the maximum it can to the global Red List Index (i.e., if all species in the country are classified as Extinct or Possibly Extinct). A downwards trend indicates declining aggregate survival probability of the country's species. The index is based on all mammals, birds, amphibians, reef-building corals and cycads native to the country (noting that not all countries support species in all these groups). During 1993-2020, the Red List Index changed at an annual rate equating to -0.39%.



Data sources: [International Union for Conservation of Nature \(IUCN\)](#) and [BirdLife International \(2018\)](#)

### How to Interpret the Indicator:

#### Red List Index

The Red List Index shows trends in the aggregate extinction risk among bird, amphibian, mammal, coral and cycad species.

This indicator is available at country scale.

Click [here](#) for more information about this indicator.



# Icon Legend

## Themes:



Terrestrial habitats



Marine & freshwater habitats



Policy & conservation actions



Species



Pollution



Sustainable use of natural resources and land



Finance, research and knowledge



Agriculture

## Targets:

### Aichi Biodiversity Targets






By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.









By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.



By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

-  By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.
-  By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.
-  By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.
-  By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.
-  By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.
-  By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

## Sustainable Development Goals

-  End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
-  Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
-  Make cities and human settlements inclusive, safe, resilient and sustainable.
-  Ensure sustainable consumption and production patterns.
-  Take urgent action to combat climate change and its impacts.
-  Conserve and sustainably use the oceans, seas and marine resources for sustainable development.



Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss. Strengthen the means of implementation and revitalize the global partnership for sustainable development.

## Multilateral Environmental Agreements



[Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services](#)



[Convention on Migratory Species](#)



[Ramsar Convention on Wetlands](#)



[United Nations on Convention to Combat Desertification](#)



[Convention on International Trade in Endangered Species of Wild Fauna and Flora](#)